

ABSTRACT OF THE DISCLOSURE

Disclosed is a silica substrate treated with a polysiloxane, and an organosilane, wherein the organosilane is described by the formula: $\text{RSi(R')}_x(\text{OR'')}_{3-x}$; wherein R is a long-chain hydrocarbon group having between about 8 to about 30 carbon atoms, which may also contain organofunctional groups such as vinyl, methacryl, amino, sulfur, and epoxy groups; R' and R'' are independently selected from a methyl and ethyl group; and X is either 0 or 1. The optimal use for the treated silica substrate is as a rheology modifier in epoxy polymer materials, however, the silica substrate could also be used in other chemical compositions such as polyurethanes, polyesters, silicones, and hydrocarbon oils.